COVID-19 Morbidity and Mortality by Race, Ethnicity and Language in Washington State

Washington State Department of Health
August 26, 2020

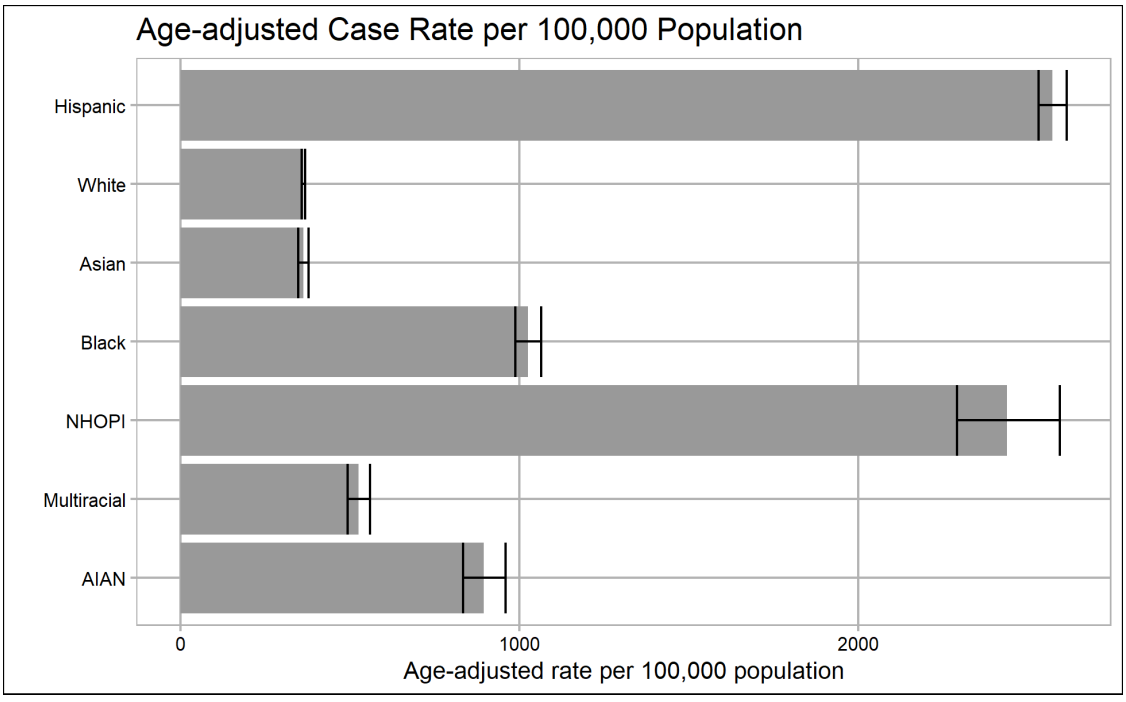
The impacts of COVID-19 morbidity and mortality have not been felt equally by all populations in Washington State. The pandemic has exacerbated the underlying and persistent inequities among historically marginalized communities and those disproportionately impacted due to structural racism and other forms of systemic oppression. This report provides an overview of confirmed COVID-19 case, hospitalization, and death rates by race and ethnicity at state and regional levels. It also provides counts and percentages of confirmed cases and hospitalizations by primary language spoken. All rates were age adjusted to the Washington State population distribution using the Office of Financial Management's (OFM) April 1, 2019 population estimates by age, sex, race, and Hispanic origin. There are a number of limitations with this analysis. Analyses are limited to population groups available by OFM for the Washington State population and following Department of Health guidelines. Hispanic ethnicity is assigned first, irrespective of race, and then racial groups are identified for those identifying as non-Hispanic. Based on this, our reporting includes the following groups: Hispanic, and non-Hispanic race categorizations for White, Black, Native Hawaiian and Pacific Islander, Asian, and American Indian/Alaska Native. While this allows one to assess information by race and ethnicity groups, this categorization is incomplete and does not reflect the diversity of people and experiences across the state. Additionally, there is a significant lack of race and ethnicity reporting for COVID-19 cases and hospitalizations (about 30% missing) and for deaths (about 1% missing). Primary language spoken is missing for about 47% of cases and hospitalizations. Age information is missing for a small percentage of cases (about 0.1%), and these cases are not included in age-adjusted rates. The lack of data limits our ability to draw firm conclusions; however, there are some very concerning patterns.

Cumulative Age-adjusted COVID-19 Case, Hospitalization, and Death Rates by Race and Ethnicity per 100,000 Population (January to August 2020)

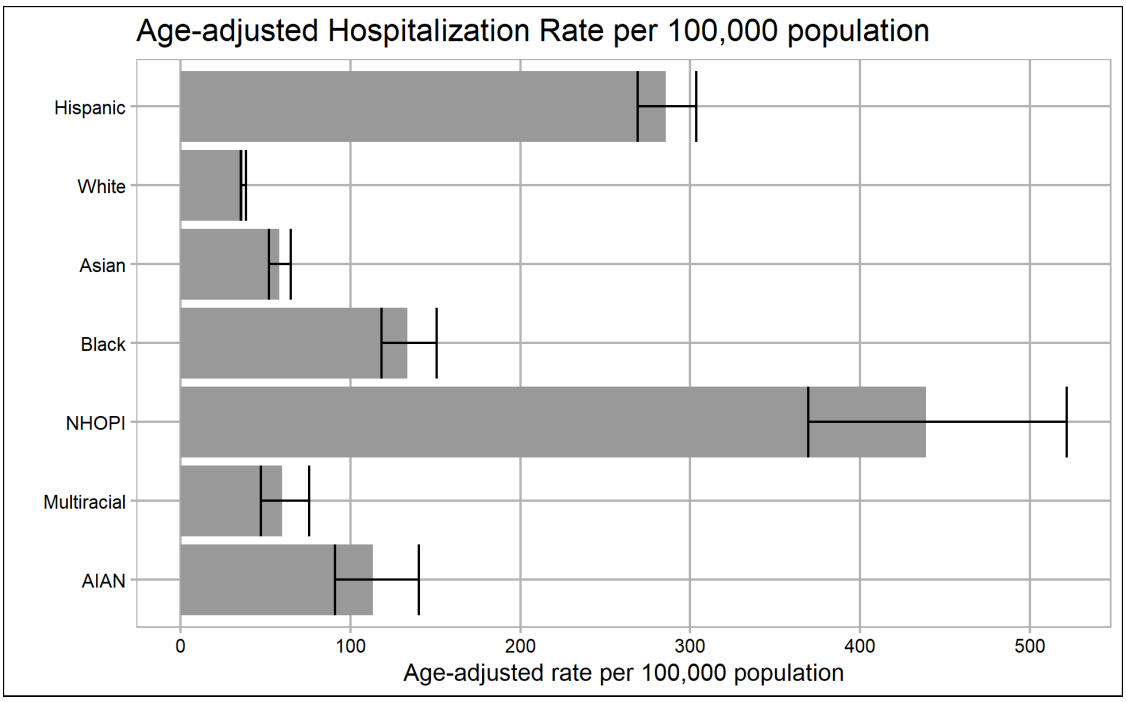
The table and figures below describe the counts and age-adjusted rates per 100,000 population in Washington by race and ethnicity for cases, hospitalizations, and deaths for the entire time period from the start of the pandemic through 2020-08-25 based on the specimen collection date. 95% confidence intervals are included in the charts. The data show that communities of color are disproportionately impacted by COVID-19 in significant ways. For cases, Native Hawaiian or Other Pacific Islander people (NHOPI) and Hispanic people have age-adjusted rates approximately seven times higher relative to White peoples. Hospitalizations are eight times higher for Hispanics and twelve times higher for Native Hawaiian or Other Pacific Islanders relative to Whites. Hospitalization and case rates for black people are approximately three times higher than those of Whites. American Indian or Alaska Native (AIAN) case rates are two and half times higher hospitalization rates are three times higher compared to whites. Among COVID-19 deaths,

we see a similar trend although not as extreme, with rates over five times higher for NHOPI, four times higher among Hispanic, and over three times higher among AIAN compared to Whites.

Race/Ethnicity	Case Count	Age-Adjusted Case Rate per 100,000	Hospitalization Count	Age-Adjusted Hospitalization Rate per 100,000	Death Count	Age-Adjusted Death Rate per 100,000
All Races	72116	955.6	6637	87.9	1880	24.9
Unknown	21730		1886		25	
Hispanic	21520	2574.1	1429	285.8	261	86
White	18946	362.3	2259	36.8	1253	19.2
Asian	2442	362.1	323	58	143	30.3
Black	2993	1024.9	293	133.5	61	36.3
NHOPI	1252	2439.3	164	438.9	30	108.6
Multiracial	1320	525.1	84	59.7	22	23
AIAN	829	894	91	113	47	77.4
Other	1084		108		38	



Source: Washington Disease Reporting System (WDRS)
Includes data from 2020-01-19 to 2020-08-25



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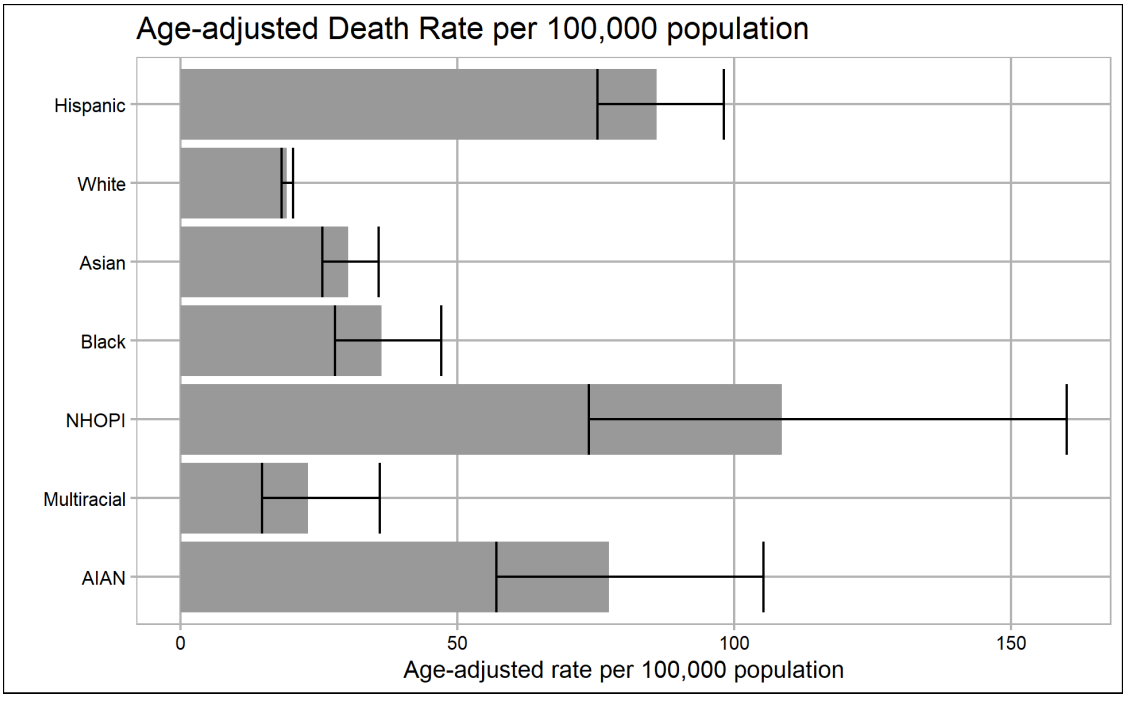
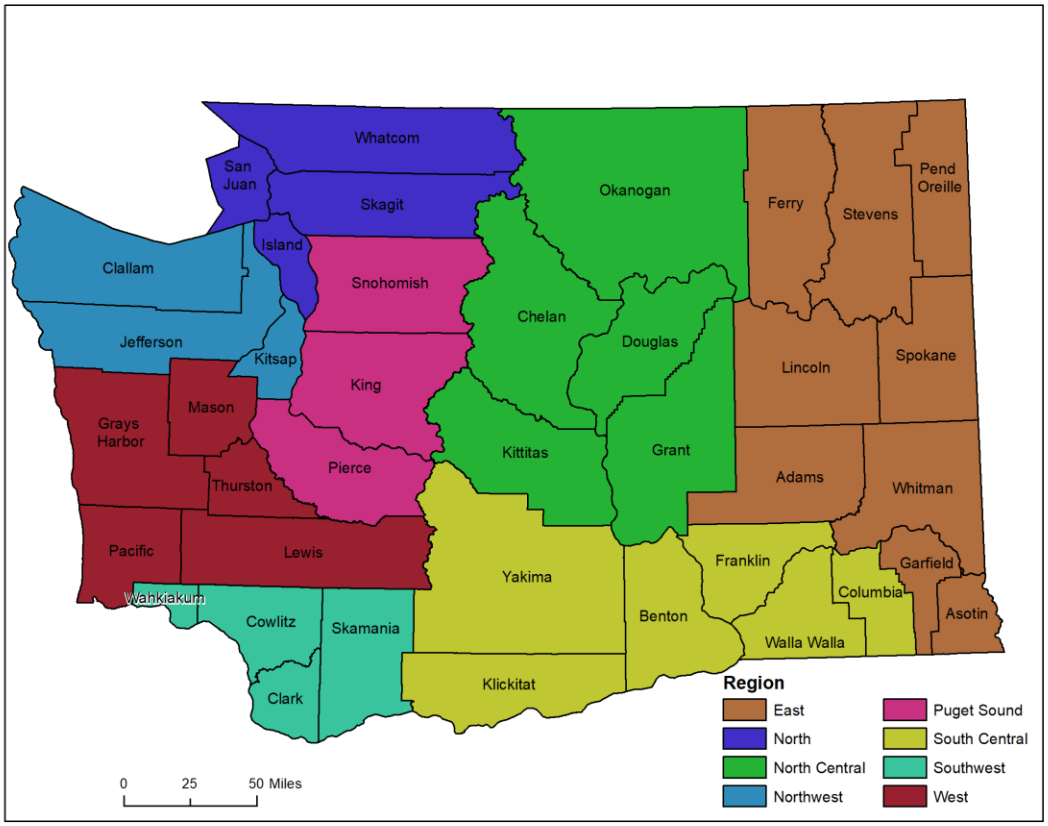


Source: Electronic Death Registration System (EDRS) and Washington Health and Life Events System (WHALES)
Includes data from 2020-01-19 to 2020-08-25

Washington Regions for Analysis

Some counties may not have sufficient case counts to analyze trends by race and ethnicity. In order to incorporate data from counties of all sizes, counties were assigned into one of 8 regions (see Map of Washington Counties and Analysis Regions below). The regions presented were developed by the Washington State Department of Health in order to better understand geographic differences in disease spread and how disease spread may be changing over time. While infection rates may not be the same within any given region, this regional grouping allows for more specific geographic analyses without excluding any counties or communities due to concerns about smaller numbers.

Map of Washington Counties and Analysis Regions



Missing Race Data by Region

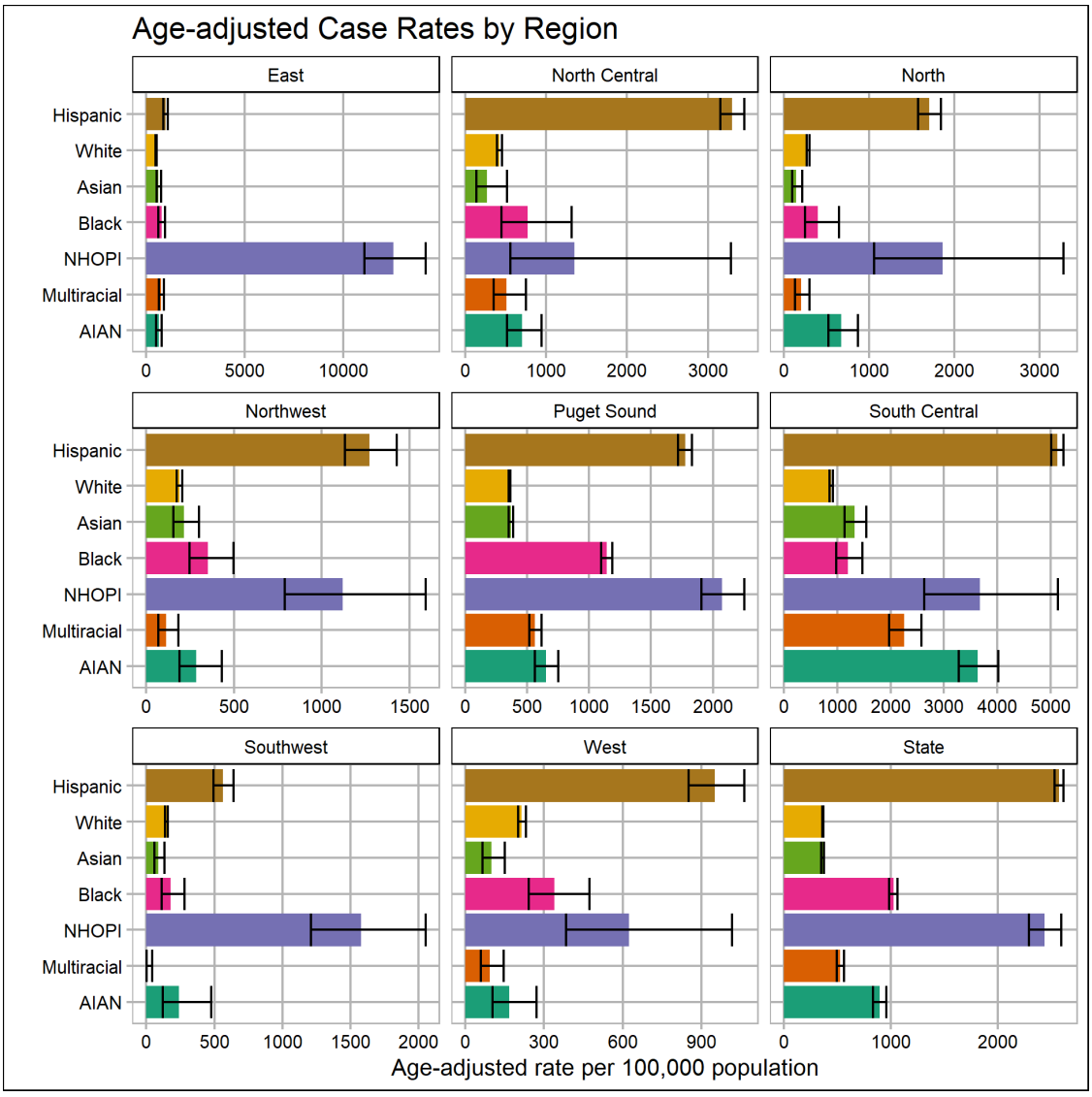
The following table summarizes missing race/ethnicity data by region. The total number of cases, the number of cases with missing data, and the percentage of cases with missing data are shown. The north central and southwest regions have the highest percentage of missing data and the north region has the lowest percentage of missing data.

Region	Case Count	Cases with Unknown Race/Ethnicity	% Cases with Unknown Race/Ethnicity
East	6203	2136	34%
North	2351	318	14%
North Central	6358	2755	43%
Northwest	1220	195	16%
Puget Sound	31629	9338	30%
South Central	19661	4824	25%
Southwest	2701	1571	58%
West	1781	367	21%
Unknown	257	256	100%

Source: Washington Disease Reporting System (WDRS)
Includes data from 2020-01-19 to 2020-08-25

Cumulative Age-adjusted Case Rates per 100,000 Population by Race, Ethnicity, and Analytic Region

The figures below describe the age-adjusted case rates by race/ethnicity and region. They were calculated using the cases with known race/ethnicity (about 70% of all reported cases). It is important to note that the numeric scale differs across regions, so use caution when comparing two or more regions, as their scale will differ. The last figure presents the results for the whole state. These data show that COVID-19 is found in significant numbers across racial and ethnic groups throughout the state, and it is not confined to certain areas, such as rural, urban, or suburban regions. Population centers in Puget Sound contribute substantially to the counts. However less populated regions, like South Central Washington, have similar differences by race/ethnicity, yet even higher rates. Further, while extreme disparities exist, people of all races and ethnicities are impacted.

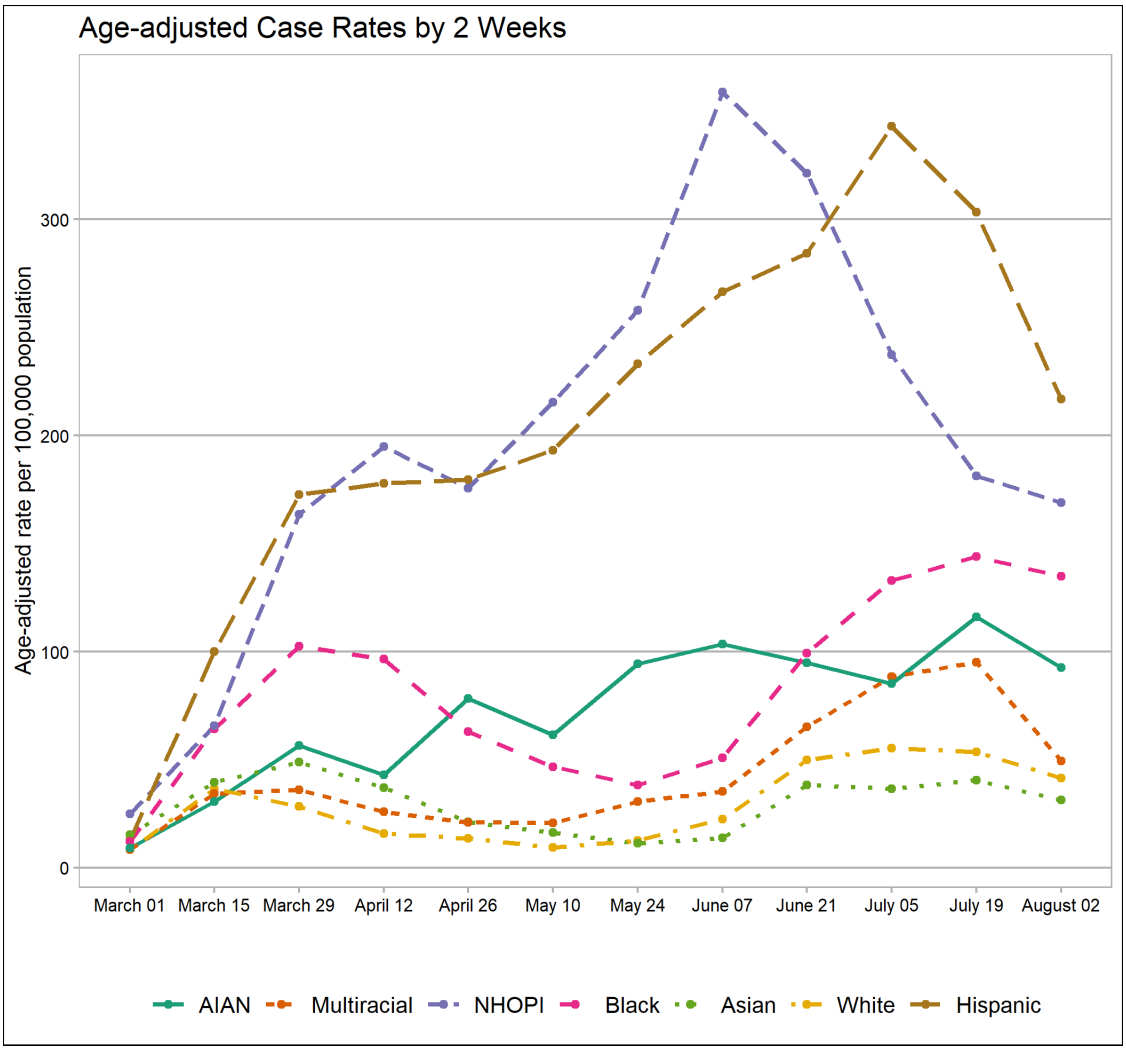


Source: Washington Disease Reporting System (WDRS)
Includes data from 2020-01-19 to 2020-08-25

Age-adjusted Case Rates per 100,000 population by Race and Ethnicity by 2 week period (March-August* 2020)

*August 2020 data include all cases with a specimen collection date through 2020-08-15 to include the most recent, complete two week period of data collection.

Monthly confirmed case rates, adjusted for age by race and ethnicity, were calculated to better understand how race- and ethnicity-specific patterns may be changing over time. Monthly race-specific counts and age-adjusted rates have increased for Hispanics, Native Hawaiians or Other Pacific Islanders, and American Indian and Alaska Natives, while they have decreased for Whites.



Race/Ethnicity	2 Week Start Date	Case Count	Age-Adjusted Case Rate per 100,000	Lower 95% Confidence Interval	Upper 95% Confidence Interval
Hispanic	March 01	88	12.9	10.1	16.5
	March 15	653	100.0	91.3	109.5
	March 29	1148	172.7	161.2	185.1
	April 12	1325	177.9	166.8	189.8
	April 26	1433	179.5	168.7	191.0
	May 10	1628	193.1	182.2	204.5
	May 24	1877	233.1	220.6	246.2
	June 07	2202	266.5	253.4	280.3
	June 21	2485	284.2	270.9	298.1
	July 05	3124	343.2	329.2	357.8
	July 19	2774	303.3	290.1	317.0
	August 02	1948	216.8	205.5	228.6
White	March 01	502	8.5	7.8	9.3
	March 15	2049	36.5	34.9	38.1
	March 29	1584	28.3	26.9	29.7
	April 12	889	15.8	14.8	16.8
	April 26	769	13.7	12.8	14.7
	May 10	521	9.5	8.7	10.3
	May 24	667	12.7	11.8	13.7
	June 07	1161	22.5	21.3	23.9
	June 21	2461	50.0	48.0	52.0
	July 05	2772	55.2	53.1	57.3
	July 19	2737	53.7	51.7	55.8
	August 02	2095	41.4	39.7	43.2
Asian	March 01	90	15.3	12.3	19.0
	March 15	260	39.6	35.0	45.0
	March 29	323	49.0	43.8	54.8
	April 12	242	37.0	32.5	42.1
	April 26	142	21.2	17.9	25.1
	May 10	110	16.2	13.4	19.7
	May 24	79	11.4	9.1	14.3
	June 07	95	13.9	11.3	17.0
	June 21	267	38.3	33.9	43.3
	July 05	254	36.5	32.2	41.4
	July 19	277	40.6	36.0	45.8

Race/Ethnicity	2 Week Start Date	Case Count	Age-Adjusted Case Rate per 100,000	Lower 95% Confidence Interval	Upper 95% Confidence Interval
	August 02	223	31.4	27.5	35.9
Black	March 01	29	12.1	8.2	17.9
	March 15	169	64.3	54.8	75.4
	March 29	269	102.5	90.3	116.4
	April 12	272	96.6	85.4	109.3
	April 26	183	63.0	54.2	73.1
	May 10	138	46.6	39.2	55.4
	May 24	107	38.3	31.3	46.8
	June 07	157	50.8	43.3	59.7
	June 21	309	99.4	88.6	111.5
	July 05	414	132.9	120.4	146.6
	July 19	431	144.1	130.7	159.0
	August 02	395	134.9	121.8	149.4
NHOPI	March 01	10	24.9	12.3	50.1
	March 15	25	65.8	41.1	105.3
	March 29	64	163.6	122.1	219.2
	April 12	100	195.0	157.7	241.2
	April 26	86	175.5	139.2	221.1
	May 10	115	215.4	176.4	263.1
	May 24	141	257.8	213.1	311.8
	June 07	196	358.9	308.3	417.8
	June 21	173	321.4	273.4	377.9
	July 05	128	237.4	196.6	286.6
	July 19	92	181.4	143.3	229.7
	August 02	84	168.9	133.1	214.3
Multiracial	March 01	11	8.4	4.3	16.3
	March 15	67	34.4	26.2	45.2
	March 29	76	36.0	27.7	46.9
	April 12	51	26.0	18.9	35.6
	April 26	53	21.0	15.5	28.5
	May 10	47	20.7	15.0	28.4
	May 24	64	30.7	23.3	40.5
	June 07	105	35.4	28.3	44.2
	June 21	200	65.3	55.3	77.1
	July 05	224	88.4	75.9	103.0

Race/Ethnicity	2 Week Start Date	Case Count	Age-Adjusted Case Rate per 100,000	Lower 95% Confidence Interval	Upper 95% Confidence Interval
	July 19	236	95.1	81.6	110.9
	August 02	145	49.5	40.6	60.2
AIAN	March 01	7	9.2	4.1	20.4
	March 15	27	30.5	20.7	45.1
	March 29	49	56.5	42.4	75.2
	April 12	41	43.0	31.7	58.5
	April 26	75	78.3	62.4	98.3
	May 10	57	61.5	47.1	80.1
	May 24	87	94.3	76.2	116.8
	June 07	99	103.6	85.0	126.3
	June 21	87	94.8	76.4	117.6
	July 05	79	85.1	67.8	106.9
	July 19	109	116.2	95.9	140.8
	August 02	84	92.5	74.1	115.4

Source: Washington Disease Reporting System (WDRS)
Data from 2020-03-01 to 2020-08-15

Cumulative Crude Case Counts and Percentages by Language Spoken

Analysis of language spoken provides another important method to understand health disparities and communities impacted by COVID-19. Use of one method alone may mask health disparities and community-specific impacts. Almost half of reported cases are missing information on primary language. Despite missing data, there are some important observations. The following table presents counts and percentages of confirmed cases, by primary language spoken. The percentage of the Washington State population 5 years and over with limited English proficiency that speak each language are also included to provide context. The Washington State data are from the Office of Financial Management 2016 estimate of population with limited English proficiency. Findings should be interpreted with caution due to the high proportion of missing data (47%).

Language	Case Count	% of Cases	% of WA Population with Limited English Proficiency*
All Cases	72161	100.0%	NA
Unknown Language	33795	46.8%	NA
Known Language	38366	53.2%	NA
English	27556	71.8*%	NA

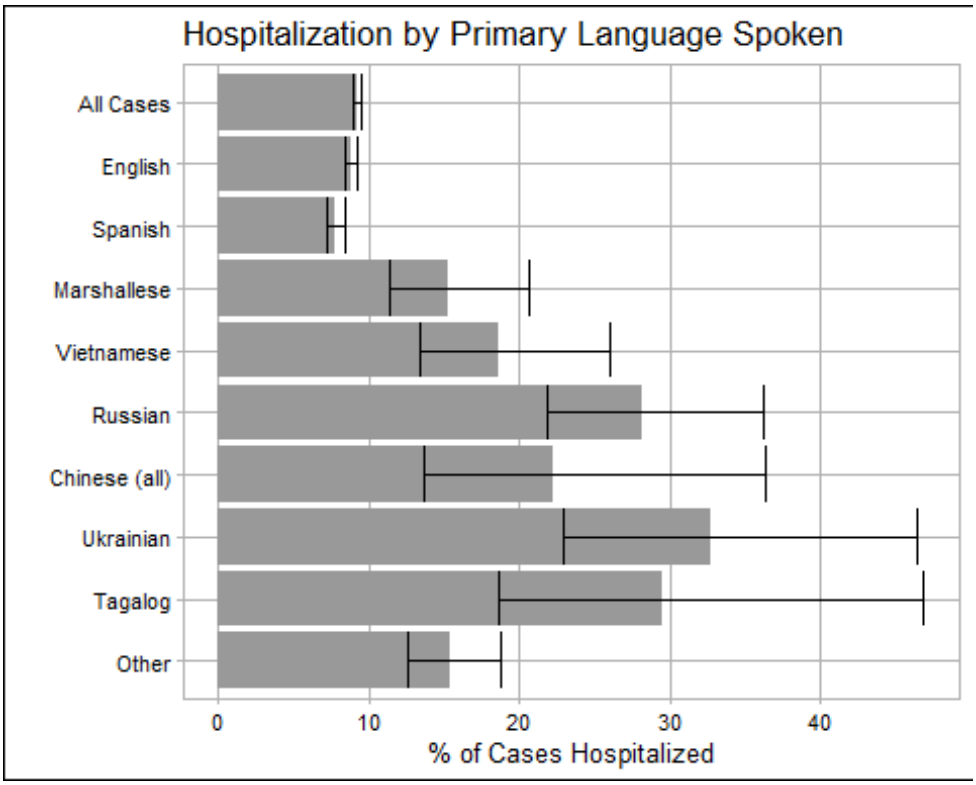
Language	Case Count	% of Cases	% of WA Population with Limited English Proficiency*
Spanish	9118	23.8*%	6.4
Marshallese	282	0.7*%	0.1
Vietnamese	188	0.5*%	0.5
Russian	217	0.6*%	0.3
Chinese (all)	72	0.2*%	0.3
Ukrainian	95	0.2*%	0.2
Somali	114	0.3*%	0.2
Tagalog	61	0.2*%	0.2
Amharic	50	0.1*%	0.1
Other	613	1.6*%	NA

*These percentages are out of the population with a known language

Cumulative Hospitalization Percentages by Language Spoken

The following graph presents percentages of confirmed cases with each primary language who were hospitalized. The high rates of hospitalizations among cases whose primary language was other than English or Spanish, suggests that increased exposures and/or barriers to care may contribute to more severe disease in these populations. Languages with less than 10 individuals hospitalized were removed from this analysis to protect patient confidentiality. Findings should be interpreted with caution due to the high proportion of missing data (47%).

Language	Case Count	Hospitalization Count	% language specific cases hospitalized
All Cases	72161	6640	9.2%
English	27556	2423	8.8%
Spanish	9118	709	7.8%
Marshallese	282	43	15.2%
Vietnamese	188	35	18.6%
Russian	217	61	28.1%
Chinese (all)	72	16	22.2%
Ukrainian	95	31	32.6%
Tagalog	61	18	29.5%
Other	613	94	15.3%


Hospitalization by Primary Language Spoken
All Cases
English
Spanish
Marshallese
Vietnamese
Russian
Chinese (all)
Ukrainian
Tagalog
Other
0
10
20
30
40
% of Cases Hospitalized